482, 1845; Clarke l.c. *Synnema triflorum* (Roxb.) O. Ktze. l.c.

Hygrophila biplicata (Nees) Sreem. comb. nov. *Adenosma biplicata* Nees in Wall. Pl. As. Rar. 3: 79, 1832 & in DC. Prodr. 11: 68, 1847. *Cardanthera avana* (Wall. ex Benth.) Benth. ex Clarke l.c. *Pedicularis avana* Wall. ex Benth. Scroph. Ind. 52, 1835. *Synnema avanum* (Wall. ex Benth.) Benth. in DC. Prodr. 10: 538, 1845. *S. biplicata* (Nees) Imlay in Kew Bull. 111, 1939.

H. heinei Sreem. nom. nov. *Ruellia uliginosa* Linn. f. Suppl. 290, 1791. *Adenosma uliginosa* (Linn. f.) Nees in Wall. Pl. As. Rar. 3: 79, 1832. *Cardanthera uliginosa* (Linn. f.) Benth. ex Clarke l.c. 403. *Synnema uliginosum* (Linn. f.) O. Ktze. l.c.; Lindau l.c.

The epithet *'uliginosa'* is preoccupied in *Hygrophila by H. uliginosa* S. Moore, J. Bot. 18 : 197, 1880—a well known African species.

Cardanthera thwaitesii Benth. and *C. anomala* Blatter are not included as I have not been able to examine materials of these species.

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A NEW SPECIES OF *GAULTHERIA* FROM NEFA

Gaultheria seshagiriana Sub. et Kum. sp. nov.

Accedit ad *G. dumicolam* W. W. Sm., ab ea tamen differt foliis minoribus, nervorum natura, bracteolis longioribus et ovario fere glabro.

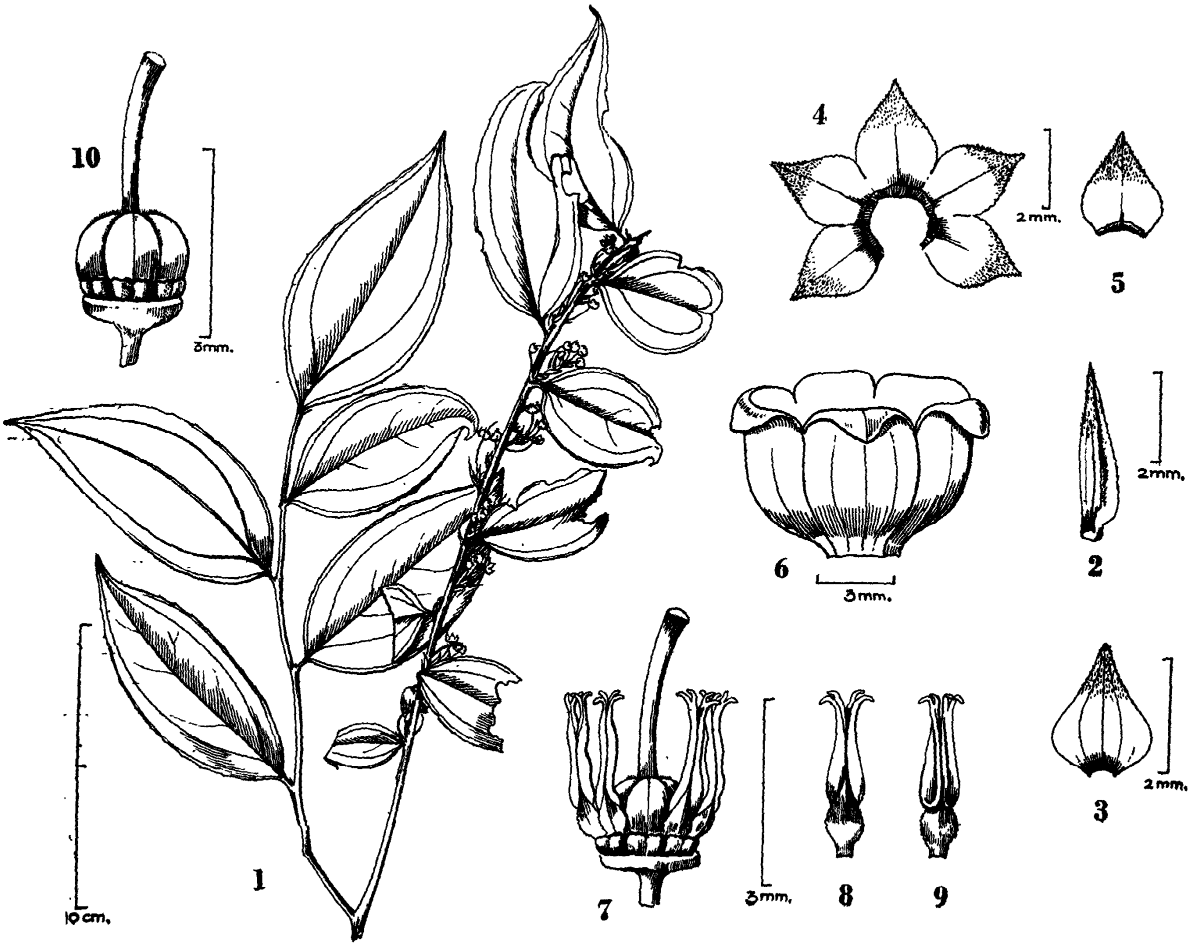
Frutex, ramis glabris. Folia alterna, glabra, 3.3-12 × 1.5-4.8 cm, ovato-lanceolata, apice breviter acuminato duro et ad latus curvato, basi rotunda vel late cuneata, marginibus mucronulato-serratis, nervis lateralibus 4, quorum par exterius, e basi surgit nec prominens est, par interius eminens e basi vel ca. 1 cm supra basin surgit, nervo medio et bino nervo interiore canaliculato in facie superiore et eminenter elevato in inferiore, reticulatione in pagina superiore plus minusve eminenti, pagina inferiore levi et nitenti; petioli 3-5 mm longi, glabri. Inflorescentia perulata, axillaris, racemosa, laxa, ad 2.5 cm longa; pedicelli 10-12 mm longi; bracteae et bracteolae ad basin pedicellorum; bracteae lanceolatae, 5-6 mm longae, dimidio superiore pubescente in utroque pagina, marginibus ciliatis; bracteolae suboppositae, 2-3 mm longae, dimidio superiore pubescente in utroque pagina, marginibus ciliatis. Calyx cupularis, ± 4 mm diam., alte 5-fidus, lobi ovoidei, acuti, nervo medio obscuro, 2.5 × 1.5 mm, pubescentes in utroque pagina prope apicem, marginibus ciliatis. Corolla late campanulata, roseo-alba, glabra, ± 3.5 mm longa, ± 5 mm diam.; lobi triangulares, acuti, ± 1 mm longi, paulum recurvi. Stamina 10, ± 3 mm longa; filamenta subulata, paulum pubescentia, 1.5 mm longa; antherae oblongo-lanceolatae, ± 2 mm longae, dorsifixae, rotundae ad basin, fastigatae supra, lobis singulis duplici cornu apicali ornatis. Ovarium 5-lobum, supra depressum, ± 2 mm diam., fere glabrum; stylus ± 3 mm longus, glaber; stigma incrassatum, sub-capitatum. Fructus baccatus, ad maturitatem caeruleus.

Holotypus *R. S. Rao* 17863A et isotypus *R. S. Rao* 17863B lecti ad Takepokoeng. alt. 1737 m, in Div. Siang in NEFA die 19 novembris 1958 a R. S. Rao, et positi in CAL.

Gaultheria seshagiriana Subbarao et Kumari sp. nov.

This species differs from *Gaultheria dumicola* W. W. Sm. in smaller leaves, nature of venation, longer bracteoles and almost glabrous ovary.

Shrub, branches glabrous. Leaves alternate, glabrous, 3.3-12 × 1.5-4.8 cm, ovate-lanceolate, tip shortly acuminate, hard and bent to a side, base rounded or broadly cuneate, margin mucronulate-serrate; lateral veins 4, the outermost pair raises at the base and not prominent, the inner pair prominent and raising from the base or ± 1 cm above the base, midrib and inner pair of veins channelled on the upper surface and prominently raised on the lower surface; reticulation on upper surface ± prominent and under surface smooth and shining; petiole 3-5 mm long, glabrous. Inflorescence perulate, axillary, racemose, lax, upto 2.5 cm long; pedicels 10-12 mm long; bracts and bracteoles at the base of pedicels, bracts lanceolate, 5-6 mm long, upper half pubescent on both sides, margin ciliate; bracteoles subopposite, 2-3 mm long, upper half pubescent on both sides, margin ciliate. Calyx cupular, ± 4 mm across, deeply 5-fid; lobes ovoid, acute with obscure midrib, 2.5 × 1.5 mm, pubescent on both sides near the tip, margin ciliate. Corolla broadly campanulate, pinkish white, glabrous, ± 3.5 mm long and ± 5 mm across; lobes triangular, acute, ± 1 mm long, slightly recurved. Stamens 10, ± 3 mm long; filaments subulate, slightly pubescent, 1.5 mm long; anthers oblong-lanceolate, ± 2 mm long, dorsifixed, base rounded, tapering above, each lobe with two apical horns. Ovary 5-lobed, depressed above, ± 2 mm in diam., almost glabrous; style ± 3 mm long, glabrous; stigma thickened, subcapitate. Fruit a berry, blue when ripe.



Gaultheria seshagiriana Subbarao et Kumari sp. nov.

Figs. 1-10 : 1. Portion of a flowering branch. 2. Bract. 3. Bracteole. 4. Calyx split open. 5. Calyx lobe. 6. Corolla. 7. Androecium and gynoecium. 8 & 9. Outer and inner views of the stamen. 10. Gynoecium and disk.

The holotype *R. S. Rao* 17863A and isotype *R. S. Rao* 17863B were collected from Takepokong (1737 m) in Siang Frontier Division, NEFA on 19-11-1958 by Sri R. S. Rao. The holotype and isotype sheets have been deposited in the Central National Herbarium, Sibpore (CAL).

The species is named in honour of the collector Shri Rolla Seshagiri Rao.

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HELICHRYSUM CUTCHICUM (C. B. CL.) R. RAO ET DESH.—AN INTERESTING SPECIES FROM WESTERN INDIA

C. B. Clarke, while working on the Asteraceae (Compositae) of India (*Comp. Ind.* 111, 1876) described *Anaphalis cutchica* on the basis of a single specimen collected by Dr. Stoliczka from Kutch, which form the semi-arid tract of India. Hooker in *Flora of British India* (3: 284, 1881) retained *Anaphalis cutchica* C. B. Cl. as a distinct species with a note, however, expressing his doubt about the retention of the species under the genus *Anaphalis* DC. Though he could make out the difference in the involucre of this taxon in comparison to that of other species of *Anaphalis,* due to insufficient material available for his study (in fact only one specimen as indicated above) no final opinion could be given by him on this issue. Since Dr. Stoliczka's collection during 1862-1868 (during which period he made botanical collections in India as indicated in *Flora Malesiana* 1, Ser. 1: 508, 1950), no collections of this taxon were made by any other workers until the field parties of Botanical Survey of India started exploration work in Kutch area from 1956. There is, however, one specimen collected by J. Indraji as early as 1918 from Bhuj area, but the specimen was identified as *Gnaphalium luteo-album* Linn. Now on the basis of profuse collections from different parts of Kutch and from Northern Saurashtra coasts, the study on the taxon has been taken up with a view to examine the correct identity of the genus. While analysing the characters in relation to those of closely allied genera like *Gnaphalium, Leontopodium* and *Helichrysum,* a few species of the respective genera have been examined and the co-operation of the Kew herbarium was sought for clarifying certain ambiguous points connected with the characterstic features of the genera concerned. There is, however, considerable difference of opinion with regard to generic disposition of the sub-tribe Gnaphalieae of the Asteraceae whose genera are very indistinctly separated, the limits being often more or less arbitrary.

For further details, capitula of a few species belonging to *Anaphalis, Gnaphalium* and *Helichrysum* were examined both at BSI Herbarium, Poona and by Mr. W. C. Jeffrey in 1961 at Kew and subsequently by the senior author in 1964 at Kew and the taxon concerned agrees to some extent with *Gnaphalium luteo-album* Linn., *G. uliginosum* Linn., *Leontopodium alpinum* Cass., *Helichrysum orientale* (Linn.) Gaertn., *H. buddleioides* DC. and *H. apiculatum* D. Don. However, *Leontopodium* is only doubtfully separate from *Gnaphalium* on mainly vegetative characters. *Gnaphalium* is, however, considered distinct from *Helichrysum* on the basis of containing more female florets than bisexual ones per capitulum. But, as Hedberg (*Afro-alpine vascular plants,* 366, 1957) has indicated, this distinction is unreliable and it may be quite appropriate that the two genera are united after a thorough revision based on wide range of material. However, *Helichrysum* and *Gnaphalium* could be separated at present on general morphological characters. Further analysis of *Anaphalis cutchica,* covering the form, disposition, colour and texture of its involucral bracts besides other characters, indicates that this taxon seems to be closely allied to some species of *Helichrysum* than with any species of *Gnaphalium.* It also appears to be some-what allied to tropical African species *Helichrysum glumaceum* DC. and also to a few Middle-east species but clearly distinct from them as verified at the Kew Herbarium.